

SINGAPORE MEDICAL DEVICES MARKET

Summary

Singapore's medical device market is expected to grow as the island state strengthens its reputation as the region's healthcare hub and center of healthcare excellence. Demand for state of the art medical technologies is high as Singapore strives to provide first class healthcare delivery systems and facilities to its residents as well as serve the international patient market. The Government of Singapore is targeting 1 million foreign patients each year, contributing S\$2.6 billion (US\$1.55) of value-added or 1% of GDP.

The U.S., Japan and Germany are the top three leading suppliers of medical equipment in Singapore. There are a significant number of companies that have established a presence by setting up there regional headquarters here in an effort to be closer to and better serve their customers. The U.S. enjoys a good reputation and is recognized by the industry as technologically superior, providing high quality, advanced and reliable equipment. However, the relatively higher cost of equipment has dampened the demand for U.S. products, which has driven Singapore companies to seek suppliers from other established markets.

The national healthcare plan covers almost 100% of the population. This augurs well for the healthcare industry as Singaporeans all have access to medical care.

At the present time, only contact lenses and care products, radiation emitting devices and condoms come under statutory control through certain provisions in the Contact Lens Practitioners Act, Radiation Protection Act and Medicine Act.

The Centre for Medical Device Regulation (CMDR) has instituted a number of voluntary measures and procedures to keep pace with global trend in the control of the availability and safety of medical devices in Singapore. They are aligned to major regulatory efforts to ensure the quality, safety and efficacy of medical devices, which can be best assessed through a balance of pre-market assessment of products, manufacturing controls and post-market monitoring. A statutory framework for Medical Devices is targeted for early 2006.

Market Overview

Singapore's healthcare services are comparable to those of other industrialized nations. In 2003, Singapore spent about S\$6.3 billion (US\$3.75 billion) or 3.8% of GDP on healthcare, out of which, the Government expenditure on health services was S\$2,007 million (US\$1195 million) or 1.2% of GDP, representing 7% of total government expenditure. The government health expenditure per person was US\$335.

In 2004, Singapore's total market size for medical devices was estimated to be US\$535 million. According to trade sources, the market for medical devices will continue to grow in view of Singapore's position as the region's medical and research hub.

The Singapore government is focused on moving up the value chain by building up services that assist research and healthcare delivery in Singapore and the region. A total of 23 hospitals and six specialty centers, provide a complete spectrum of clinical services from basic health screening to complex quaternary care. Singapore's public

hospitals and specialty centers engage in clinical research with the many pharmaceutical, biotechnology and medical technology companies based in Singapore. Singapore's goal is to become Asia's premier healthcare hub via the attraction of foreign patients. In 2004, close to 320,00 foreign patients sought treatment in the city-state, and the target is to grow this to 1 million by year 2012. There is also an emphasis towards a healthy lifestyle and a focus on preventive care. As such, U.S. companies with revolutionary or cutting-edge medical technology or focus on health screening and disease management would find Singapore an ideal place to launch their products. Doctors here are also pushing ethical and professional standards, and it is expected that every major hospital in Singapore will have attained the widely recognized American mark of quality health care. One private and six public hospitals have been accredited by the Joint Commission International (JCI), the overseas arm of the United States' main hospital accreditation agency.

Singapore provides a high level of medical services at a relatively low cost compared to other developed countries. The average Singaporean household spends US\$54 a month on healthcare, excluding Medisave, or 3.0% of monthly expenditure.

Singapore's healthcare budget will double to about 8.0% of its GDP by 2030. The extra expenditure for the next 25 years is earmarked to go towards coping with a growing, graying population who will live longer and demand more expensive healthcare.

Healthcare Financing

Singapore has a hybrid healthcare financing framework which is driven by two key principles: individual responsibility and with community and government support for those in need. The health care financing framework upholds the principle that individuals must first look to themselves and their immediate family members for the financial resources to pay for the healthcare services they consume. Government subsidies and community support help keep basic healthcare affordable even to those with insufficient means.

To help Singaporeans pay for hospitalization expenses, the government introduced the following healthcare financing plans:

Medisave: A compulsory savings plan to help individuals save and pay for their healthcare expenditure. Designed to help Singaporeans build up sufficient savings, especially during their old age.

MediShield: A basic, low cost catastrophic medical insurance plan to complement Medisave to help meet the cost of large medical bills. Premiums are paid through Medisave.

Medifund: A health endowment fund which provides a safety net for the poor and needy

Eldersshield: Introduced in 2002, it is an affordable severe disability insurance scheme, designed to provide Singaporeans with basic financial protection against expenses required in the event of severe disabilities.

Medisave is used for hospitalization expenses including surgery fees and outpatient expenses listed under an "approved list" as well as for hospice care, day and convalescent hospitals. Standard outpatient expenses and expenses for cosmetic surgery are not payable under Medisave.

The Health Ministry recently announced that patients will now be able to use more of their Medisave savings if they need long-term outpatient treatment such as chemotherapy or kidney dialysis. It also plans to raise the payouts under Medishield.

Double-digit growth in the incidence of cancer, the second leading cause of death in Singapore, is a major concern to the Singapore Government.

Market Trends

According to the latest national health survey carried out in 2004 and published in mid 2005, Singaporeans are generally healthier now as compared to six years ago. They are exercising more and suffer less from heart-linked ailments such as hypertension and diabetes. Such surveys are carried out every six years on more than 4,000 adults aged between 18 and 69 years of age. Singapore's health report card showed that between 1998 and 2004:

The proportion of people with high cholesterol levels fell from 25.4 per cent to 18.7 percent; Diabetes among adults fell from 9 per cent to 8.2 percent, High blood pressure fell from 21.5 per cent to 20.1 per cent; the number of smokers fell from 15.2 per cent to 12.6 per cent; Obesity inched up marginally from 6 per cent to 6.9 percent; the rate of regular exercise went up from 16.8 per cent to 24.9 per cent.

A key reason for the overall improvement in health status could be an increased awareness of the need to be healthy and through health promotion campaigns launched by the Health Promotion Board, a statutory board that promotes good health and a healthy lifestyle plus various self-help groups.

While these improvements are encouraging, certain trends are disturbing. The major causes of morbidity and mortality among Singaporeans are cancer, coronary heart diseases, diabetes, hypertension and stroke.

Cancer is the No. 1 killer in Singapore. The 5 most common cancers are colorectal, lung, stomach, liver and nasopharynx. As many as four in every 100 Singaporeans over the age of 50 has suffered a stroke. This already high incidence of stroke is expected to double in the next 20 years as the population ages. Singapore's prevalence of stroke is high compared to other countries such as Taiwan, India and the U.S. The incidence of diabetes is also of concern as there are 43 million people with diabetes in the region today and this is expected to double to 76 million by 2025. Data for Singapore indicates that diabetes is the direct cause of one in 12 deaths from heart diseases, and one in 17 deaths from stroke. World Health Organization figures indicate that the incidence of diabetes in Singapore is set to go up from the current 8% of the population to 17% by 2030. Singapore already has the highest rate of diabetes in Asia. A renowned expert in this area predicts that within 10 years, type 2 diabetes, seen only among older people, will overtake type 1 as the predominant form among children. Singapore started seeing

young children with type 2 diabetes more than 10 years ago, and currently one third of young diabetic patients have this form.

In view of these developments, the Ministry of Health has recently embarked on a pilot scheme to enlist the family physicians (General Practitioners) to help manage patients with diabetes, high blood pressure and high cholesterol. Thirty doctors in private practice will each monitor five patients and set specific targets and help their patients meet them.

In the area of cancer screening, Tan Tock Seng Hospital, a public-sector hospital, has embarked on a program with Johns Hopkins Singapore International Medical Centre to treat public hospital patients receiving government subsidy. This program is a first of its kind with a foreign institute and will continue to enhance Singapore's position as a regional and international medical hub. Cancer screening is also offered at the Singapore Cancer Society, a not-for-profit organization, that offers free cancer screenings to Singaporean and Permanent Residents for colorectal cancer (faecal occult blood test), cervical cancer (pap smear), Breast Cancer (clinical breast exam). Colorectal Screening is only available to those aged 50 and above. The majority of Singaporeans pay for health screenings through out-of-pocket expenses.

To better understand the health profile of its citizens, Singapore has embarked on its largest-ever medical study to explore the link between genes, environment and disease. It will start with 22,000 people and will eventually involve up to 250,000 and span decades to probe how diseases, such as diabetes, heart problems, breast and colorectal cancer affects people of different races. In the future, this will enable Singapore healthcare professionals to tailor public health programs and policies to be more effective. Singapore's Agency of Science, Technology and Research has committed S\$20 million (US\$12 million) to this study for the next five years.

U.S. companies with products and services that cater to health screening and healthcare delivery and management would do well in this market.

Import Market

In 2004, U.S. exports to Singapore increased by 18%, valued at US\$207 million. Market share, however, decreased marginally to 23% of total imports, down from 27% in 2003. The market rebounded in 2003 and 2004 after remaining stagnant in 2002. This increase is largely due to the recovery in the economy and the impact of SARS in the region which led to heightened interest in infection control measures and products.

Imports from the U.S. are estimated to increase based on data available for the first seven months of 2005, however, market share will probably decrease to approximately 20% of all medical device imports into Singapore. Re-exports to the region account for 37% of all imports.

	2003	2004	2005 (estimated)
Total Market Size	342	535	690
Total Local Production	738	957	997
Total Exports	1024	1320	1414

Total Imports	628	898	1107
Imports from the U.S.	170	207	218

The above statistics are unofficial estimates

Source: IE Singapore, Singapore Trade Statistics

Notes: Data is in millions of USD. The exchange rate for 2003 (1USD=1.74SGD), 2004 (1USD=1.7SGD) and for 2005 (1USD=1.68 SGD)

The U.S. continues to dominate the market for exports to Singapore, capturing 23% of market share (US\$207 million), followed by Japan, Germany, The Netherlands and the United Kingdom. Although the market share for U.S. products is unlikely to change drastically in the next two years, Japan is considered a prime competitor as Japanese products are gaining ground in price and quality vis-à-vis U.S. products. Compared to U.S. principals, Japanese and European principals are also more willing to give extra discounts to their distributors.

Competition

Medical professionals regard the U.S. as the leader in medical research and development (U.S. R&D is considered five years' ahead of other developed countries), and are continuously seeking new devices from the U.S. However, the U.S. is not price competitive in the lower-end consumables, typically supplied by manufacturers in more labor-abundant countries throughout Asia. For high technology equipment, the after-sales service provided by the manufacturer's agent/distributor is an important factor.

Major competitors of the U.S. are medical devices from Germany, other European countries, Japan and Australia. Local production by multinational corporations and indigenous Singapore companies is primarily for export. Over the past 10 years, the Singapore government has successfully developed the manufacturing sector for medical devices. Under the Economic Development Board's (EDB) promotion plan, the medical manufacturing sector is one of the areas of the life sciences industry, which is targeted for growth. Pharmaceuticals manufacturing is the other area. The EDB has identified the biomedical sciences as the fourth pillar of Singapore's manufacturing sector. According to statistics released by the EDB, the sector's sterling performance in 2004 saw manufacturing output grow by 33.2% to reach S\$15.8 billion (US\$9.4 billion). Singapore holds 30% of the world market share of the manufacture of hearing aids.

Medical Manufacturing

Baxter International (blood transfusion sets, infusion pumps)

Beckon Dickinson (medical hypodermic syringes and needles)

C.R. Bard (urology, cardiology, radiology supplies)

Genelabs (viral diagnostic kits)

Marketing / Support Offices/ Regional Offices:

3M Technologies (S) Pte Ltd

Bio-Rad Laboratories (Life science products and clinical diagnostics)

Boston Scientific (less invasive medical devices used to enlarge narrowed blood vessels, etc)

GE Pacific (MRI, radiotherapy, radiographic, ultrasonic scanners)

Fisher Scientific (medical laboratory, medical/surgical supplies)

Johnson & Johnson (medical disposables, patient monitoring, vascular access, surgical instruments)

Medtronic International (medical technology aimed at cardio-vascular, neurological conditions, etc.)

Philips (diagnostics equipment)

Scimed (angioplasty systems, ultrasonic scanners, cardiac catheters)

Tyco Healthcare (disposable medical supplies, monitoring equipment, medical instruments and bulk analgesic pharmaceuticals)

Welch Allyn (front line point of care and patient monitoring products)
- recently expanded operations to include an R & D centre in Singapore

Stryker (patient handling products)

Zimmer (orthopedic, surgical implants)

End Users

Singapore has a mixed healthcare market comprising competent public and private providers and together they provide excellent healthcare services and offer choices to both Singaporeans and foreign patients.

Demand for medical devices comes from public and private hospitals and clinics. The Ministry of Health (MOH) is the largest consumer, accounting for nearly 70% of local demand. The Parkway Group, owner of the three largest private hospitals in Singapore, is also a significant consumer of medical devices. More than 80% of local demand is met through imports.

There are two public sector healthcare clusters which account for 80% of healthcare facilities and approximately 6200 hospital beds, providing both acute and extended patient care. The two clusters are the National Healthcare Group and the Singhealth Group. Both clusters are positioned as not-for-profit entities which allows them to be exempt from corporate tax and the pressure to pay dividends to shareholders.

The private sector consists of the Parkway Healthcare Group which manages 3 acute hospitals and medical centers, the Raffles Medical Group, Mount Alvernia Hospital and several more.

Restructured Hospitals & Specialist Clinics

National Healthcare Group

Alexandra Hospital (*)
National University Hospital
Tan Tock Seng Hospital
Woodbridge Hospital / Institute of Mental Health
The National Skin Centre
The Cancer Institute
The Eye Institute
The Heart Institute

(*) The Alexandra Hospital will move to new premises in the northern part of Singapore. It is a new US\$235 million general hospital which will be ready by March 2009.

More information can be found on www.nhg.com.sg

Singapore Health Services (SingHealth)

Singapore General Hospital
Changi General Hospital
KK Women's And Children's Hospital
Ang Mo Kio Community Hospital
National Cancer Centre
National Dental Centre
National Heart Centre
Singapore Eye Centre

More information can be found on www.singhealth.com.sg

Private Hospitals

- Parkway Group

Mount Elizabeth Hospital
Gleneagles Hospital
East Shore Hospital

More information on the Parkway Group of Hospitals can be found on www.pgh.com.sg

- Raffles Medical Group

Raffles Hospital
Raffles Medical Centre

More information on the Raffles Medical Group can be found on www.rafflesmedical.com

- Mount Alvernia Hospital

More information on Mount Alvernia Hospital can be found on <http://mtalvernia-hospital.org>

- Thomson Medical Centre

(specialize in gynecology, obstetrics and pediatrics)

More information on Thomson Medical Centre can be found on www.thomsonmedical.com

- Johns Hopkins Singapore International Medical Centre

More information on the Johns Hopkins Singapore International Medical Centre can be found on www.imc.jhmi.edu

Price and quality are often cited as primary factors that determine purchasing decisions of medical devices. Other considerations are reliable and prompt after-sales service. For large government procurement, purchases are typically made via tender announcements.

There are central purchasing departments consisting of a team from the various public sector hospital's Material Management Departments (MMDs) who work together to achieve economies of scale for large purchases. Singapore medical distributors are familiar with the process.

Typically, hospitals make their own purchasing decisions and source for products through the MMDs in the various hospitals. They will in turn consult with the end-users (healthcare professionals) of the medical equipment on the product specifications.

For public sector hospitals, tenders will be issued for purchases that exceed S\$10,000 (US\$6,000). Information on tenders are made available through "GeBiz" or through direct invitations to the trade. GeBiz (www.gebiz.gov.sg) is the Government of Singapore's one-stop e-procurement portal. All the public sector's invitations for quotations and tenders are posted on GeBIZ. Suppliers can search for government procurement opportunities, download tender documents, and submit their bids online.

For purchases below S\$10,000 (US\$6000), the MMDs will invite at least 4 suppliers who can supply the equipment to bid. The public sector purchasing/planning cycle follows the Government of Singapore's financial year, from April 1 – March 31. Besides the two healthcare clusters, other end-users of medical equipment and supplies include the Singapore Armed Forces and Civil Defence Force.

For the private sector, purchase decisions are made by the end-users of the equipment in consultation with the hospital's MMDs. Suppliers of U.S. products are required to aggressively market their products and keep abreast of requirements of the healthcare institutions.

Market Access

There are no custom duties on medical devices. A 5.0% goods and services tax (GST) is imposed on all goods sold and services provided, locally. Imports are subject to GST, but payments are refundable on re-exports.

Regulatory Environment

At the present time, only contact lenses and care products, radiation emitting devices and condoms come under statutory control through certain provisions in the Contact Lens Practitioners Act, Radiation Protection Act and Medicine Act.

The Centre for Medical Device Regulation (CMDR) will have in place a number of voluntary measures and procedures to keep pace with global trends in the control of the availability and safety of medical devices in Singapore. They are aligned to major regulatory efforts to ensure the quality, safety and efficacy of medical devices, which can be best assessed through a balance of pre-market assessment of products, manufacturing controls and post-market monitoring. In its pre-market assessment of devices, CMDR adopted the consensus standards and requirements on safety, quality and performance that will satisfy the regulatory requirements of developed countries (such as USA, European Union, Canada or Australia).

A statutory framework for Medical Devices is targeted for the beginning of 2006.

The level of regulatory control applied to devices is proportional to the degree of perceived risk associated with the device. This is the basis of a risk-based classification of medical devices. The strictest controls therefore only apply to the limited number of high-risk products. Devices may be classified into 4 classes: Class I (low risk), IIa and IIb (medium risk) or III (high risk) according to European Union classification rules. It is the responsibility of the manufacturer to ensure that all medical devices placed on the market in Singapore are included in the Register. The pre-market information sought from manufacturers for inclusion in the Register is similar to the information manufacturers are required to provide with their devices if they are to comply with regulatory provisions in their country of origin and meet essential requirements on safety, quality and performance.

Market Entry

U.S. companies who are new to the market and interested in exporting to Singapore may consider appointing a local distributor to represent their company's product and services. Given the small market size of the island state, most potential distributors would request for exclusive rights to sell the product. This will ensure that they commit their resources to promoting the product to the appropriate end-users and reap the returns should a sale materialize. This will also demonstrate the U.S. exporter's commitment to the local market. There is no special legislation in Singapore covering agency agreements. Such contracts should be based on mutually agreed terms and conditions between the two parties.

Depending on the medical equipment, the U.S. company will be required to either provide samples, or accord special rates to the potential distributor for "demo units". The potential distributor will use the samples to conduct a survey of the market to ascertain interest in the product while the "demo units" will be used as they demonstrate the U.S. products' technology to the potential buyers.

U.S. exporters of medical equipment should evaluate the suitability of the distributor based on the company's contacts in the market, their product range and whether their products complement that of the U.S. company.

As the sales in the local market increases, the U.S. company can look into setting up an on-going presence in Singapore much like how some large MNCs have set up regional offices in Singapore. This brings the U.S. company closer to their customers, demonstrates their commitment to the region and allows for prompt and enhanced customer service.

Opportunities for Profile Building

U.S. products enjoy a good reputation in Singapore and the region for high quality and advanced technology. U.S. companies can take part in regional trade shows or sector-specific conferences where they can showcase their products, technologies and services.

Upcoming Trade Shows / Events / Conferences

Singapore is rated as Asia's top convention city. U.S. exporters interested in the Asian market should consider participating at the following trade show:

Event	:	Hospimedica Asia
Dates	:	October 4 - 6, 2006
City / Site	:	Suntec Singapore International Convention and Exhibition Centre
Event Industry	:	Hospital, Pharmaceutical, Medical & Rehabilitation Equipment & Supplies
Theme	:	
Event Description:	:	Hospimedica Asia is considered one of Asia's leading and most authoritative regional platform for the medical and health industry.

For information on other more sector-specific events, please visit :
<http://mice.visitsingapore.com>

Key Contacts

Companies interested in exploring the Singapore market can refer to the list of contacts listed below:-

American Embassy
Commercial Section
27 Napier Road
Singapore 258508
Tel: 65/476-9037
Fax: 65/476-9080
Website: <http://www.buyusa.gov/singapore> or
http://www.buyusa.gov/asianow/asianow_healthcare_team.html
Contact: Ms. Luanne Theseira, Commercial Specialist
E-mail: luanne.theseira@mail.doc.gov

Ministry of Health
College of Medicine Building
16 College Road
Singapore 169854

Tel: 65 / 6223 7777
Fax: 65 / 6224 1677
Website: www.moh.gov.sg
Email: moh_info@moh.gov.sg

Contact: Ms. Karen Tan, Director, Corporate Communications

Health Sciences Authority
Center for Medical Device Regulation
11 Biopolis Way
#11-03 Helios
Singapore 138667
Tel: 65/6866 3560
Fax: 65/6478 9028
Website: www.hsa.gov.sg
Email: HSA_CMDR_Info@hsa.gov.sg

Contact: Mr. WONG Yew Sin, Director
Ms. May Ng Yin Mei, Regulatory Scientist

Singapore Economic Development Board
20 Biopolis Way
#09-01 Centros
Singapore 138668
Tel: 65/6395 7700
Fax: 65/6395 7798339-6077
Website: <http://www.sedb.com> or <http://www.Biomed-Singapore.com>
Contact: Mr. Abel Ang, Head, Medical Technology
Ms. Debbie Tan, Senior Officer, Medical Technology
Ms. Joanna Lee, Senior Officer, Healthcare Services